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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,514

03/15/2007

Kiichiro Kato

24-036-TN

1025

23400 7590 03/24/2010

POSZ LAW GROUP, PLC  
12040 SOUTH LAKES DRIVE  
SUITE 101  
RESTON, VA 20191

EXAMINER

VONCH, JEFFREY A

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/24/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/590,514	<b>Applicant(s)</b> KATO ET AL.	
	<b>Examiner</b> Jeff A. Vonch	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's arguments filed February 26<sup>th</sup>, 2010 have been entered.
2. All previous rejections have been withdrawn. However, upon further review, a new ground(s) of rejection has been made.

### ***New Rejections***

3. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.**

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama (JP 1-125345) (hereinafter "Aoyama") in view of Xie et al. (U.S. Patent No. 6,503,620) (hereinafter "Xie").
6. Regarding claims 1 and 2, Aoyama teaches a pressure-sensitive adhesive sheet with a plurality of through-holes (claim 1 in the specification). These holes have a diameter preferably about 0.005 mm - 0.05 mm (page 3, last paragraph). In the embodiment (page 4) the thickness of the adhesive layer is said to be 30 microns. "[W]hen, as by a recitation of ranges or otherwise, a claim covers several compositions, the claim is anticipated if one of them is in the prior art"

Art Unit: 1794

*Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP 2131.03 I.

7. Also in the embodiment (pages 4-5 and Figure 2) the depicted sheet falls within the claimed hole density. In a 100 mm x 100 mm square, three pairs of rows could fit in the vertical direction with twenty columns in a horizontal direction (6 x 20) giving a hole density of 120 per 100 cm<sup>2</sup>. The density could possibly be as high as 10,000 holes per 100 cm<sup>2</sup> given the lowest diameter of through-hole with the lowest possible distance between them.

8. However, Aoyama does not teach a storage modulus at  $T_{\max}$  (wherein  $20^{\circ}\text{C} \leq T_{\max} \leq 130^{\circ}\text{C}$ ) of not less than  $4.5 \times 10^3$  Pa and a loss tangent at  $T_{\max}$  of not more than 0.78.

9. Xie teaches a laminate comprised of a facstock bonded to a pressure sensitive adhesive layer (pressure-sensitive adhesive sheet) wherein the adhesive layer material has its storage modulus and loss tangent measured from  $T_{\max} - 60^{\circ}\text{C}$  to  $200^{\circ}\text{C}$  (col. 26, lines 51-54). All blends have a storage modulus ( $G'$ ) equal to or greater than  $3.7 \times 10^3$  Pa at their lowest point (Table X). Xie teaches that Blend 1 has a storage modulus of  $3.6 \times 10^4$  Pa and a loss tangent of 0.3 at  $120^{\circ}\text{C}$  (Table X). Blend 4 has a storage modulus at  $25^{\circ}\text{C}$  of  $2.4 \times 10^8$  Pa and a loss tangent of 0.1 (Table X). Xie teaches that the laminate is a label to be adhered to an adherend, although Xie may not disclose the temperature exposure. With respect to Claim 1, ambient temperature exposures would be expected to include the claimed temperature range.

10. It would have been obvious to one of ordinary skill in the art at the time of invention to provide Aoyama with the claimed storage modulus and loss tangent. One of ordinary skill in the art would have been motivated to reduce adhesive flow and bleed from label edges and maintain integrity at elevated temperatures (col. 27, line 62 - col. 28, line 50).

11. Claims 3/1 & 3/2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama (JP 1-125345) (hereinafter "Aoyama") in view of Xie et al. (U.S. Patent No. 6,503,620) (hereinafter "Xie"), as applied to claims 1 and 2 above, further in view of Andriash (U.S. Patent No. 5,679,435) (hereinafter "Andriash").

12. Aoyama/Xie teach a perforated pressure-sensitive adhesive sheet used for decorative purposes and having the proper storage modulus and loss tangent claimed as recited above (see Section 103 Rejections).

13. Aoyama/Xie do not teach the through-holes are formed through laser processing.

14. Regarding claims 3/1 and 3/2, Andriash teaches perforation of pressure sensitive adhesive sheets over mechanical punching due to the dies becoming gummed up with the adhesive layer (col. 5, lines 34-40 & col. 3, lines 60-67).

15. It would have been obvious to one of ordinary skill in the art at the time of invention to apply laser perforation to the form the holes of the pressure-sensitive adhesive sheet of Aoyama. One of ordinary skill in the art would have been motivated use a method that cuts through multiple materials easily and does not clog when cutting through an adhesive layer (col. 5, lines 34-40 & col. 3, lines 63-67).

### ***Response to Arguments***

16. Applicant's argument regarding the presence of through-holes changing the modulus of the adhesive sheet is persuasive in that they would have changed the storage modulus of Xie.

Art Unit: 1794

17. However, it is the Examiner's position as recited above it would have been obvious and motivated to add the storage modulus and loss tangent as claimed to a pressure-sensitive adhesive sheet perforated as claimed without changing the quality of the through-holes, unlike in the previous rejection where the addition of the through-holes would change the storage modulus and loss tangent pressure-sensitive adhesive sheet. The addition would in fact enhance the perforated sheet as the perforations would provide additional edges within the sheet. Xie's storage modulus and would prevent adhesive from flowing into the holes (newly created edges). One of ordinary skill in the art at the time of invention creating edges (holes) on a pressure sensitive adhesive sheet would have been motivated to use the storage modulus and loss tangent of Xie in order to prevent flow into those edges.

18. Applicant's argument regarding Furukawa's hole density teaching away from the range of Applicant is also persuasive. However, the hole density and adhesive layer thickness in Aoyama renders obvious Applicant's ranges as claimed.

### ***Conclusion***

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff A. Vonch whose telephone number is (571) 270-1134. The examiner can normally be reached on Monday to Thursday 8:30-6:00 EST.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1794

/J. A. V./  
Jeff A. Vonch  
Patent Examiner, Art Unit 1794  
March 5<sup>th</sup>, 2010